to be considered a contra-indication when it is far advanced. Albuminuria, unless accompanied by other signs of tubercular nephritis, is not a contra-indication; and, indeed, in the two cases in which it was noted, it disappeared soon after the operation.

HYGIENE AND PUBLIC HEALTH.

UNDER THE CHARGE OF
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Injurious Constituents of Rubber Articles with which Children of Different Ages come in Contact.

A. Bulowsky (*Archiv für Hygiene*, Bd. xv., Heft 2, p. 125) details a number of experiments made by him to determine what kinds of rubber articles may work injury to children. He disagrees with C. Ewald, who has maintained that vulcanized rubber nipples can injuriously affect infants by causing violent diarrhœas through formation of sulphuretted hydrogen gas, and shows that no such formation occurs. Rubber nipples, teething-rings, dolls, and other toys have often been found to contain varying amounts of lead, oxide of zinc, sulphate of barium, antimony, and other substances. Bulowsky examined seventeen gray rubber nipples, dolls, etc., and found one containing a small amount of lead, and one containing over 10 per cent. of sulphate of barium. They all contained from 32.18 to 58.66 per cent. of oxide of zinc. All of these articles sank in water. Thirteen black rubber nipples, rings, etc., yielded but small amounts of mineral matter, none contained lead or zinc, and all floated in water. A black rubber doll which sank in water yielded 47.03 per cent. of ash containing 14.48 per cent. of sulphate of lead. Five red-brown rubber dolls and toys, which sank in water, contained from 7.37 to 26.70 per cent. of sulphide of antimony. None of the above contained any arsenic.

Since small children have a strong tendency to carry everything to their mouths, experiments were made to determine what action the saliva may exert on these constituents of rubber, and what action, if any, may be exerted by milk on rubber nipples. Digestion of ten grammes of finely cut red-brown rubber, from a doll containing 26.70 per cent. of sulphide of antimony, with saliva for twenty-four hours gave no trace of antimony in the saliva. Digestion of eight grammes of another similar doll for forty-eight hours yielded also negative results, showing that antimony in rubber is harmless. Two similar experiments with a black doll containing lead gave traces of lead in the saliva. The ease with which chronic lead-poisoning is produced by small doses of lead must lead to the conclusion that such articles should be regarded as dangerous.

Experiments with a gray doll containing 58.66 per cent. of oxide of zinc, showed that saliva will take up traces of zinc. Sour milk was found to exert a similar action on rubber containing 33.71 per cent. of the same substance. According to Oesterlen, Heinzerling, Naunyn, Kobert, and others, small doses of zinc lead to chronic zinc-poisoning. Bulowsky's conclusions are that:

1. Rubber articles are harmless when they float, are elastic, and are of soft consistence.
2. The greater the specific gravity, the greater the ash and the less the value.
3. Black nipples and rings are harmless.
4. Black dolls which sink are dangerous on account of lead.
5. Red and red-brown dolls and toys are harmless.
6. All gray rubber articles, especially those which children put into their mouths to suck, are more or less harmful on account of the contained oxide of zinc.

THE CHOLERA EPIDEMIC AT HAVRE.

GIBERT, in a communication to the Academy of Medicine (*Bulletin de l'Académie de Médecine*, October 3, 1892), gives an account of the Havre epidemic up to September 27th, and the measures adopted to combat its spread. The disease was not imported by sea, nor did it come from Hamburg, for although the steamer Rugia arrived at Havre from Hamburg on August 23d with a number of cases on board—the first cases to enter the harbor—there had already been seventy-one fatal cases in the city. Nor was it brought from St. Petersburg, where the disease did not appear until August 9th. Cholera was known to exist at Hamburg on August 18th, when two fatal cases occurred, while, as was learned on investigation, the first death at Havre occurred on July 15th, the second on July 28th, and the third on August 3d; after the latter date the cases increased rapidly. The first cases came from the suburbs of Paris.

Of the first fifty patients received in the two hospitals at Havre, forty-eight died. No epidemic at Havre ever began with such fatal results. Up to September 26th, in one hospital, which was badly managed, there were thirty-six deaths in fifty-seven cases, twelve of which arose within the walls. At the other hospital, which had better accommodations, there were six hundred and four admissions and two hundred and forty-four deaths.

A large number of patients died very quickly after seizure, having had no diarrhœa or vomiting.

On August 19th active steps were taken to combat the epidemic. A number of day medical stations and a permanent station for night-work were established, the latter connected with all the police stations by telephone, and the hospital service was well organized. The physicians attached to the sanitary service called every two or three hours at the police stations for addresses where any cases might have occurred, and recorded their observations and directions as to proper measures to be taken.

Clothing was disinfected by steam, dwellings by corrosive sublimate, sulphate of copper, carbolic acid, and other chemicals, and a general washing down of gutters, roofs, courtyards, etc., was carried out. The efficacy of the measures adopted was evident within a very few days.

THE CHOLERA EPIDEMIC IN KASHMIR IN 1892.[1]

THE Valley of Kashmir, surrounded by lofty mountains, is about 100 miles long by 20 at its greatest breadth, and about 5200 feet above the sea-level. The climate is variable: the average temperature in winter is 45°; in summer the sun is hot, and the noon temperature is about 90°. The spring is usually rainy; in summer it rains frequently, but the total rainfall is not high. Up to comparatively recent times, although cholera is perennial in the Punjab, the disease has appeared in the valley only when the epidemic in the Punjab has been of unusual severity; but now, owing to much-increased intercourse, Kashmir has, from a commercial point of view, become a part of the Punjab. Therefore, when in March and April cholera was raging in almost every part of the Punjab, it was anticipated that sooner or later the epidemic would invade Kashmir. The winter had been exceptionally mild, with very little snowfall, and was followed by a season of drought. During April and May, which months are usually rainy, scarcely any rain fell. Before the epidemic appeared the ground-water level was very low. The soil was infiltrated with decaying vegetable and animal matter, and presented a favorable nidus for the cholera poison whenever it might be introduced; and when this happened, the germs found other conditions favorable for the growth of an epidemic. The Kashmiris are notoriously filthy, and 125,000 of them are crowded into the city of Srinagar, which is in about the centre of the valley, is two miles long, and a mile and a half in its widest part. The city is built on both sides of the river Yhelum, and through the city also runs a canal, the Nalla Mar, which was once used as a source of water-supply, but now is but a string of cesspools. The population is crowded into 25,000 low, dirty houses, built irregularly on narrow lanes and alleys, which are used as latrines. There is no drainage, and the storm-water washes the filth and ordure into the Nalla Mar and into the river from which the drinking-water is obtained.

The general health of the people had been already much reduced by an epidemic of influenza. The difficulty of obtaining food and the Ramazan fasting had produced a condition of semi-starvation.

When the disease appeared at Srinagar the sale of unripe and rotten fruit and vegetables was forbidden; the people were urged to boil their drinking-water and to seek medical aid on the appearance of the first symptoms, and a circular giving full directions was extensively circulated. In spite of this, however, the beds and clothes of patients and the bodies of the dead were washed in the river and canals from which water was drawn for drinking and domestic purposes, and the dejecta of many cases in the boats on the river were thrown into the water, while drinking-water for the patients and others in the boats was taken from the same spot almost simultaneously.

During the epidemic it was observed that in the vast majority of cases the time of invasion was early morning, and that the eating of unripe fruit, or of ripe fruits in large quantity, raw cucumbers, fermenting buttermilk, raw raddish leaves and cabbage leaves, and putrid soft cheese, acted in a large number of cases as the exciting cause. The disease was confined principally to the poorer classes, though several cases occurred among those in the higher stations of life. The first outbreak of the disease was most malignant. It declined far more gradually than it began, and as it abated the type of the disease became less virulent until, finally, the last few cases were of extremely mild nature. The most congested parts of the town showed the largest number of seizures and deaths, and the progress of the epidemic was most rapid in the direction of the overcrowded parts where the sanitary conditions were necessarily bad, and slowest where the population was sparse.

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[1] The Cholera Epidemic in Kashmir, 1892. By A. Mitra, F.R.C.P., F.R.C.S., Chief Medical Officer, Kashmir. Calcutta: Thacker, Spink & Co.

In the treatment, the city was divided into districts; extra men detailed; one medical assistant was posted at each police station to attend urgent calls and a cholera hospital was opened. Out of a total strength of sixty medical assistants and attendants, who were constantly with the sick, but six were attacked, and five died.

The drugs used were numerous, and mostly in the forms of secret preparations, all of which appear to have been equally inefficient, the results leading to the conclusion that "we do not as yet know of a drug the administration of which can reduce cholera mortality in any appreciable degree."

From May 6th to August 15th there occurred in Srinagar 9041 cases, of which 5781 were fatal, and in the whole valley there were 16,845 cases, of which 11,712 terminated fatally.

DISINFECTION IN CHOLERA EPIDEMICS.

IN a proclamation relative to cholera issued by the Prussian Government (*Deutsche Vierteljahrsschrift für öffentliche Gesundheitspflege*, xxiv, p. 554) the following instructions for carrying out disinfection are given. As disinfectants, are to be used:

1. Milk of lime (one part of lime to four of water). This is to be kept in a well-covered vessel and stirred up before being used.
2. Chloride of lime, freshly prepared and well kept. Evidence of its good quality is its strong peculiar smell. It can be used in powder form, or in solution of two parts in one hundred of cold water. The latter should be allowed to settle and the clear supernatant fluid be poured off.
3. Three per cent. solution of potash soap.
4. Solution of carbolic acid. The crude acid is not suitable. The so-called hundred per cent. acid is a convenient form, and is quite as efficient as the pure acid. One part is added with constant stirring to twenty parts of hot three per cent. solution of potash soap. If the pure acid is used it may be dissolved in simple water.
5. Steam under pressure of not less than a tenth of an atmosphere.
6. Boiling water. The articles to be disinfected to be boiled at least a half-hour, the water to be boiling constantly, and the articles completely covered.

Manner of using disinfectants. 1. The liquid discharges to be received as far as possible in vessels, mixed with about an equal volume of milk of lime, and allowed to remain in contact at least one hour. Chloride of lime may be used, two heaping tablespoonfuls of the powder to each half-litre, and well mixed. Disinfection is complete in fifteen minutes.

2. The hands and other parts of the body coming in contact with infected articles (discharges, soiled clothes, etc.) must be disinfected each time by thorough washing with solution of chloride of lime or of carbolic acid.

3. Bed and body linen and other articles of clothing which may be washed should be put into receptacles with disinfectants immediately on being soiled. Either the solution of soap or of carbolic acid may be used. In the former they should remain at least twenty-four hours, in the latter at least twelve hours before being rinsed and further cleaned. Steaming or boiling may also be employed, but in this case they must first be well wetted with the disinfectant, and placed in well-closed vessels or bags, or wrapped up in cloths well wetted with the disinfectant, in order that those who handle them before disinfection may be exposed as little as possible to the danger of infection. In any event, all who touch such articles should disinfect their hands as above.

4. Clothing which cannot be washed may be disinfected by steam. Leather articles may be wiped with carbolic or chloride of lime solution.

5. Wooden and metallic parts of furniture and similar articles should be carefully and repeatedly rubbed with cloths wet with carbolic or potash soap solution. The floors of sick-rooms should be treated in the same way. The rags used should be burned. Floors can be disinfected also by milk of lime, which may be washed off after two hours of contact.

6. Walls and woodwork may be whitewashed. After disinfection, the rooms should be left at least twenty-four hours unoccupied and well aired.

7. The ground, pavement, and gutters fouled by cholera discharges, or in which suspicious waste runs, can be disinfected by copious flooding with milk of lime.

8. In privies a litre of milk of lime should be poured daily down each seat opening. The seats should be washed with the potash soap solution. All receptacles in which excrement is deposited must be well limed inside and out after being emptied.

9. Articles which cannot be treated as above, or when steam apparatus or disinfectants are not to be had, should be put out in the sun and air for at least six days, and protected from rain.

10. Articles of little value, as straw bedding for instance, should be burned.

[The Bavarian Government issued practically the same instructions several days later.—C. H.]

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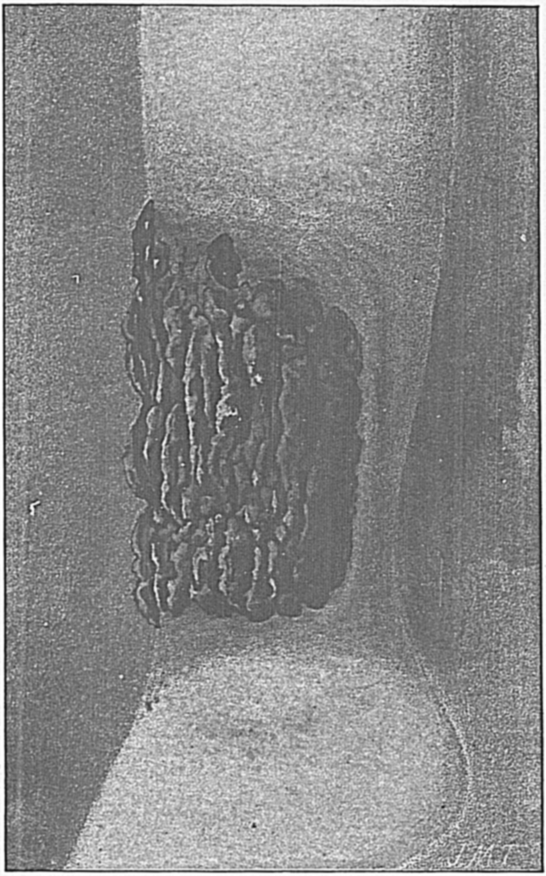

Drawing of unusual form of disease of skin
in a case of Hysteria.